

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1 (canceled).

2. (previously presented) A tape reel inspection device for inspecting a position of each

flange on inner diameter side or outer diameter side of flanges, distance between flanges, and an inclined angle of inner surface of each flange in a tape reel having a pair of disk-shaped flanges fixed to both ends of a cylindrical hub, comprising:

a rotator that rotates the tape reel in a circumferential direction of the flanges centering on the hub;

a first light projector that irradiates a first parallel light that passes a first measuring point set up on the inner diameter side of the inner surface of one of the flanges, and a second parallel light that passes a second measuring point set up on the inner diameter side of the inner surface of the other flange, so that the first measuring point and the second measuring point are in the same position in an axial direction of the flanges;

a first light receiver that receives the first parallel light that passes the first measuring point and the second parallel light that passes the second measuring point, and obtains the first

measuring point and the second measuring point based on the receiving position of the first parallel light and the second parallel light;

 a second light projector that irradiates a third parallel light that passes a third measuring point set up on the outer diameter side of the inner surface of the flange, and a fourth parallel light that passes a fourth measuring point set up on the outer diameter side of the inner surface of the flange so that the third measuring point and the fourth measuring point are in the same position in the axial direction of the flanges; and

 a second light receiver that receives the third parallel light that passes the third measuring point and the fourth parallel light that passes the fourth measuring point and obtains the third measuring point and the fourth measuring point based on the receiving position of the third parallel light and the fourth parallel light.

3. (previously presented) An inspection method using an inspection device described in claim 2, comprising the steps of:

 irradiating the first, second, third, and fourth parallel lights toward the first, second, third, and fourth measuring points from the first light projector and the second light projector, while rotating the tape reel by the rotator;

 receiving the first, second, third, and fourth parallel lights that pass the first, second, third, and fourth measuring points by the first light receiver and the second light receiver, and obtaining the first, second, third, and fourth measuring points based on the receiving positions of the first, second, third, and fourth parallel lights;

calculating a position of each flange on the inner diameter side of each flange and the distance between flanges, from the first measuring point and the second measuring point;

calculating a position of each flange on the outer diameter side of each flange and the distance between flanges, from the third measuring point and the fourth measuring point;

calculating an inclined angle of the inner surface of one of the flanges from the first measuring point and the third measuring point;

calculating an inclined angle of the inner surface of the other flange from the second measuring point and the fourth measuring point; and

comparing the calculated position of each flange on the inner diameter side of the flange and distance between flanges, the calculated position of each flange on the outer diameter side of the flange and distance between flanges, an inclined angle of inner surface of one of the flanges, and the inclined angle of the inner surface of the other flange, with target values prepared beforehand, to thereby determine accuracy of the position of each flange on the inner diameter side or on the outer diameter side of the tape reel, the distance between flanges, and the inclined angle of the inner surface of each flange.

Claims 4-6 (canceled).